

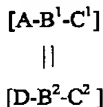
P. Rhode et al.
U.S.S.N. 09/766,378
Page 2

The listing of claims will replace all prior versions, and listings, of claims in the application. Please amend claims 25, 26, 28, and 29 as follows. Please cancel claims 44 and 46 without prejudice.

Listing of Claims:

Claims 1-24. (Cancelled).

Claim 25. (Currently Amended) An empty polyspecific MHC complex comprising an sc-MHC class II molecule comprising linked in sequence an MHC β chain-peptide linker-MHC α chain, the MHC molecule having the general formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule,
- b) B1, B2 are each independently a joining molecule,
- c) C1, C2 are each independently an effector molecule or -H, wherein the effector molecules are each selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, and
- d) D represents at least one empty sc-MHC class II molecule, ligand binding molecule or -H.

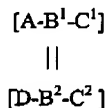
ST AVAILABLE COPY

P. Rhode et al.
U.S.S.N. 09/766,378
Page 3

Claim 26. (Currently Amended) A polyspecific MHC complex comprising an empty sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule, B is a joining molecule, and C is an effector molecule or -H, and the effector molecule is selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, provided that when the complex is represented by A-C-B, -C- is not -H.

Claim 27. (Original) A loaded polyspecific MHC complex formed by contacting the polyspecific MHC complexes of claim 25 or 26 with a presenting peptide under conditions which form a specific binding complex between the presenting peptide and at least one of the empty sc-MHC class II molecules.

Claim 28. (Currently Amended) A polyspecific MHC complex fusion molecule comprising an sc-MHC molecule with peptide binding groove, the MHC molecule comprising linked in sequence an MHC β chain-peptide linker-MHC α chain, the complex being represented by the following formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule comprising a recombinantly fused presenting peptide,
- b) B1, B2 are each independently a joining molecule,

P. Rhode et al.
U.S.S.N. 09/766,378
Page 4

c) C1, C2 are each independently an effector molecule or -H, wherein the effector molecules are each selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, and

d) D represents at least one empty sc-MHC class II molecule, ligand binding molecule or -H.

Claim 29. (Currently Amended) A polyspecific MHC fusion molecule comprising a sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae: A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule comprising a recombinantly fused presenting peptide, B is a joining molecule, and C is an effector molecule or -H, and the effector molecule is selected from the group consisting of a cell toxin other than ricin or diphtheria toxin, a chemotherapeutic drug, a radionuclide, a protein tag, a hormone, a fluor, an enzyme, an enzyme substrate, a cofactor, an inhibitor, a ligand, a hapten, biotin, a carbohydrate, and a fatty acid, provided that when the complex is represented by the formulae: A-C-B, -C- is not H.

Claims 30-37. (Cancelled).

Claim 38. (Previously Presented) The polyspecific MHC complex of any of claims 25, 26, 28, or 29, wherein the polyspecific MHC complex comprises the complex in Figure 9B.

Claim 39. (Previously Presented) The polyspecific MHC complex of any of claims 25 or 28, wherein the joining molecules are each selected from the group consisting of a helix-turn-helix motif and a dendrimer particle.

Claim 40. (Previously Presented) The polyspecific MHC complex of any of claims 26 or 29, wherein the joining molecule is selected from the group consisting of a helix-turn-helix motif and a dendrimer particle.

P. Rhode et al.
U.S.S.N. 09/766,378
Page 5

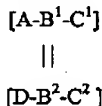
Claim 41. (Previously Presented) The polyspecific MHC complex of any of claims 25 or 28, wherein the ligand binding molecule is selected from the group consisting of an immunoglobulin, a single-chain antibody, an Fv, and a receptor ligand.

Claim 42. (Previously Presented) The polyspecific MHC complex of claim 41, wherein the immunoglobulin, single-chain antibody, or Fv is capable of binding a cell surface target selected from the group consisting of CD2, CD3, CD4, CD8, CD28, CD40, CD45, CTLA4, and Fas.

Claim 43. (Previously Presented) The polyspecific MHC complex of claim 41, wherein the receptor ligand is selected from the group consisting of FasL, CD80, and CD86.

Claim 44. (Cancelled)

Claim 45. (Currently Amended) An empty polyspecific MHC complex comprising an sc-MHC class II molecule comprising linked in sequence an MHC β chain-peptide linker-MHC α chain, the MHC molecule having the general formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule,
- b) B1, B2 are each independently a joining molecule,
- c) C1, C2 are each independently an effector molecule or -H, and
- d) D represents at least one empty sc-MHC class II molecule, ligand binding molecule or -H,

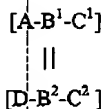
wherein each effector molecule is a protein tag, and wherein the protein tags are each is selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

P. Rhode et al.
U.S.S.N. 09/766,378
Page 6

Claim 46. (Cancelled)

Claim 47. (Previously Amended) A polyspecific MHC complex comprising an empty sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule, B is a joining molecule and C is an effector molecule or -H, provided that when the complex is represented by A-C-B, -C- is not -H, wherein the effector molecule is a protein tag, and wherein the protein tag is selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

Claim 48. (Previously Presented) A polyspecific MHC complex fusion molecule comprising an sc-MHC molecule with peptide binding groove, the MHC molecule comprising linked in sequence an MHC β chain-peptide linker-MHC α chain, the complex being represented by the following formula:



wherein,

- a) A represents at least one empty sc-MHC class II molecule comprising a recombinantly fused presenting peptide,
- b) B1, B2 are each independently a joining molecule,
- c) C1, C2 are each independently an effector molecule or -H, and
- d) D represents at least one empty sc-MHC class II molecule, ligand binding molecule or -H,

wherein each effector molecule is a protein tag, and wherein the protein tags are each selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

P. Rhode et al.
U.S.S.N. 09/766,378
Page 7

Claim 49. (Previously Presented) A polyspecific MHC fusion molecule comprising a sc-MHC class II molecule comprising a peptide binding groove, the complex being represented by the formulae: A-B-C, B-A-C, or A-C-B, wherein A is at least one sc-MHC class II molecule comprising a recombinantly fused presenting peptide, B is a joining molecule and C is an effector molecule or -H, provided that when the complex is represented by the formulae: A-C-B, -C- is not H, wherein the effector molecule is a protein tag, and wherein the protein tag is selected from the group consisting of 6xHIS, EE epitope, and myc epitope.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.